INSTALLATION INSTRUCTIONS AND USER GUIDE

ELNUR

CE

ECOMBI

WALL FIXED ELECTRIC STORAGE HEATER

ECO158
ECO208
ECO308
ECO408

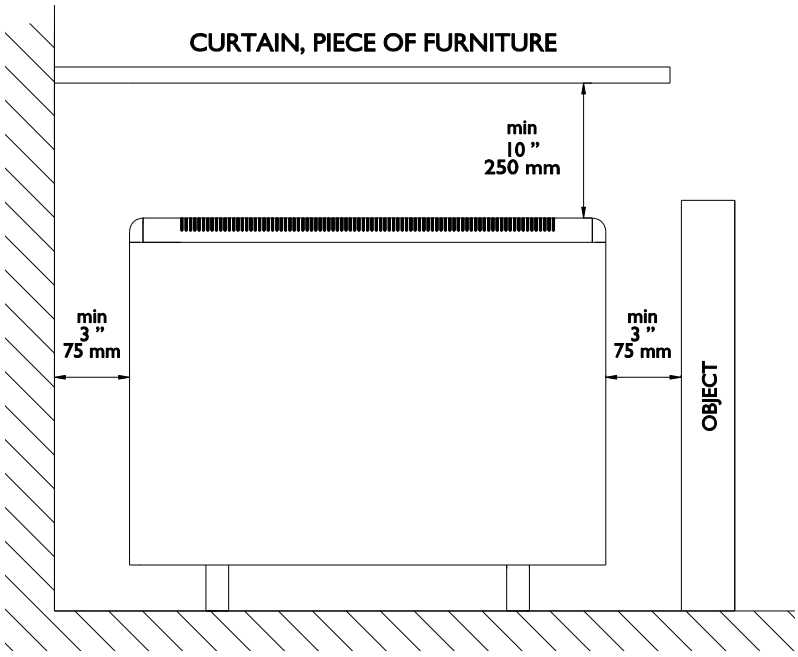
Please read these instructions before installing or using this appliance for the first time

Gabarrón
Manufacturing Excellence

1. –IMPORTANT INSTRUCTIONS

When using electrical appliances, basic precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

- **WARNING: Please read all instructions before installing or using this heater for the first time.**



- This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces.
- Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, etc. and curtains at least a foot (30cm) from the front, sides and rear of the heater.
- It is essential that the indicated minimum clearances are maintained.
- CAUTION — Some parts of this product can become very hot and cause burns. Particular attention must be given where children and vulnerable people are present.
- Children should be supervised to ensure they do not play with the heater.
- Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating unattended.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning the use of the appliance in a safe way and understand the hazards involved. Children must not play with the appliance. Cleaning and user maintenance must not be made by children without supervision.
- Children aged from 3 years and less than 8 years shall only switch on/off the appliance provided that it has been placed or installed in its intended normal operating position and they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children aged from 3 years and less than 8 years shall not plug in, regulate and clean the appliance or perform user maintenance.
- Children of less than 3 years should be kept away unless continuously supervised.
- Do not operate any heater after it malfunctions. Disconnect power at service panel and have heater inspected by a reputable electrician before reusing.
- Do not use outdoors.
- To disconnect heater, turn controls to off, and turn off power to heater circuit at main disconnect panel.
- Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire, or damage the heater.
- To prevent a possible fire, do not block air intakes or exhaust in any manner.
- Air inlets and outlets provide proper operation of the appliance and prevent its overheating. DO NOT cover air inlet and outlet grills.
- A heater has hot and arcing or sparking parts inside. Do not use in areas where gasoline, paint, or flammable vapors or liquids are used or stored.
- Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
- This guide must be kept and given to any new user.
- **SAVE THESE INSTRUCTIONS**

2. - INSTALLATION INSTRUCTIONS

The symbols used in the text are explained below:

WARNING This indication shows the possibility of causing death from electric shock.

WARNING This indication shows the possibility of causing death or serious injury.

CAUTION This indication shows the possibility of causing injury or damage to properties only.

Symbol for useful information.

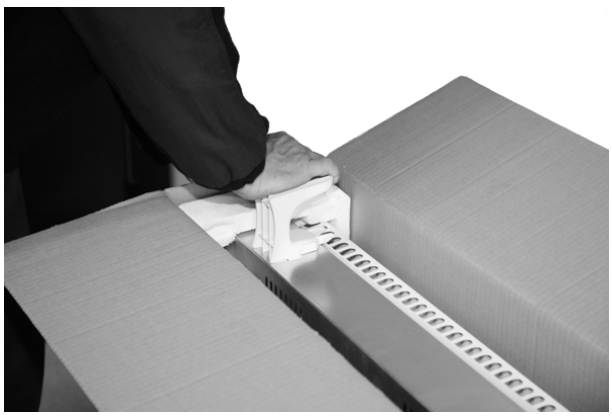
IMPORTANT: Wiring procedures and connections shall be in accordance with the national and local codes having jurisdiction.

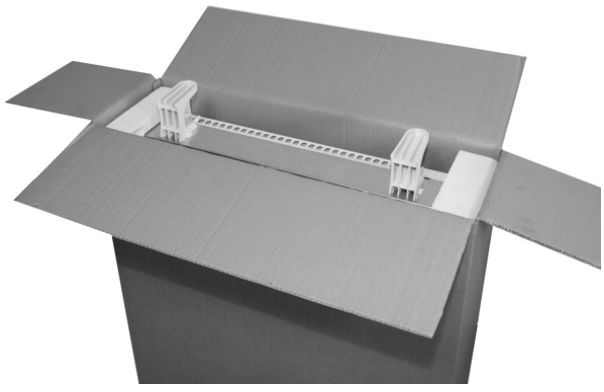
- The warranty of the heater will not cover any damage caused by non observance of any of these instructions.
- The installation must be carried out in accordance with the current local electrical regulations. Any installation or reinstallation has to be carried out by an experienced technician.
- Please check that the voltage in the rating label fits the power supply.
- This appliance must be grounded.
- The appliance should not be installed just below an electrical receptacle.
- The appliance must be installed in such a way that it is impossible for anyone using a bath or shower, to touch the controls.
- If during any installation the thermal insulation shows any sign of damage, it must be replaced.
- This heater should be switched off at the circuit breaker before any repair work is carried out. This should also be done during times of the year when heat is not required.
- This appliance is only for permanent connection to a fix installation. After installation a survey of the first charging cycle should be carried out to ensure that the main input thermostat switches off. Ventilate the room during this first cycle.
- Never open a charged heater.
- To maintain stability, it is essential that the heater is placed on a level surface and care should be taken to avoid irregular surfaces, such as may result from carpets or tiled surrounds partially protruding under the heater.
- The presence of air particles of smoke, dust and other pollutants could, in time, discolor the walls and surfaces around the heater.

In order to achieve a correct installation of this device, follow these steps:

1. - Choose the right location to install ECOMBI. The minimum clearances must be respected from the appliance to any combustible material such as furniture or curtains. **To reduce the risk of fire, do not store or use gasoline or other flammable vapors and liquids in the vicinity of the heater.**

2. - Open the carton at the indicated side and install the supporting feet without removing the heater.





Turn the carton upside down to allow the heater to stand on its feet and remove the carton. Check that it is the correct model and that it is in good conditions.

Check that all parts have been delivered and are intact.

- 1 Ecombi heater casing.
- 1 bag containing 2 screws and 2 dowels.
- 2 supporting feet.
- This guide.

The casing and storage bricks are supplied separately. Check the supplied bricks packages correspond to the ones indicated on the heater carton.

The heater operation is not affected if bricks with minor damage are used.

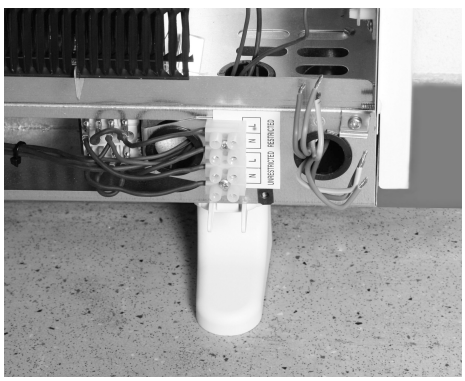
3. - Take off the front panel by removing the two screws located at the bottom. Fix the lateral fittings to the metal structure by using the appropriate screws.

4. - Place ECOMBI in your selected installation area. Use the heater fixing holes as a template and mark the wall through the fixing holes with a pencil. Drill the required holes into the wall. Place the dowels and screws into the holes before the appliance installation but do not fasten them tightly.

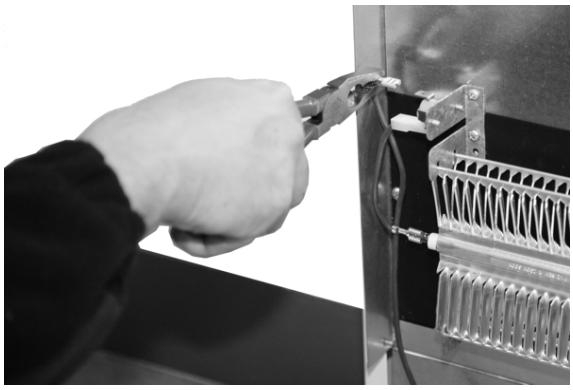
5. Attach ECOMBI to the dowels with the crews. IT MUST NOT BE HUNG ON THE SCREWS; these are used only to prevent the device from overturning and not to support it. If there is any doubt concerning the wall strength, consult the corresponding construction specialist. The appliances are heavy; it is the installer responsibility the correct installation and wall support of these devices to prevent them from overturning.

6. - Connect the heater using the wiring diagram included at the end of this manual. Tighten properly the connection block screws. Use only silicone insulated cables. Do not leave any remaining wire inside the heater.

WARNING Touching live connections can cause serious personal injury.



7. - Disconnect the aluminum heating element by removing the FAST-ON terminal on each end of the element.

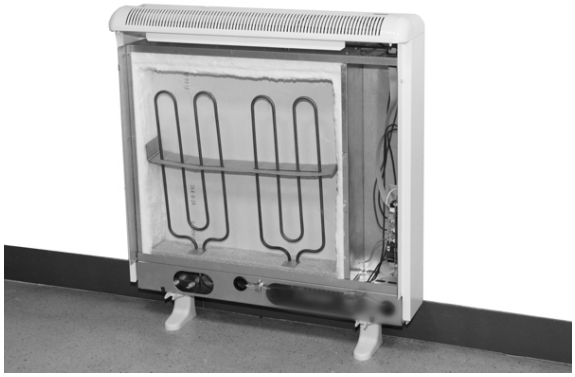


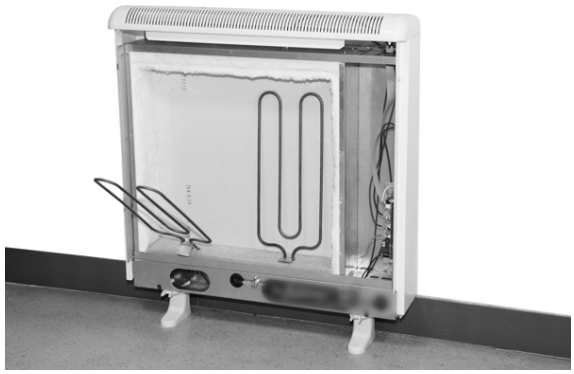
WARNING Steel edges can cut.

Next unscrew the inner panel and remove it.

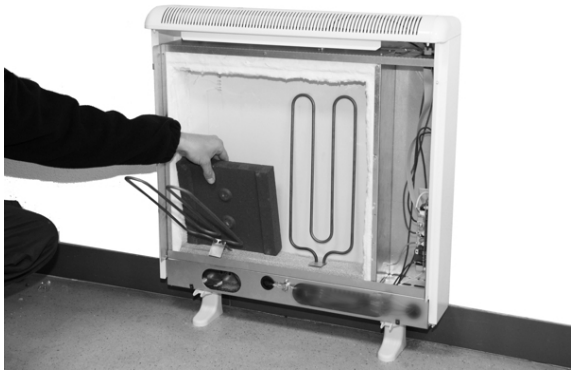
CAUTION In the interior part of this inner panel there is a very delicate thermal insulation MICROTHERM panel. It has to be handled with extreme care. AVOID TOUCHING IT.

8. Do not disconnect the electrical heating elements. Remove the packing cardboard. Lift and tilt the elements outwards being careful not to damage the insulation on the bottom of the heater.

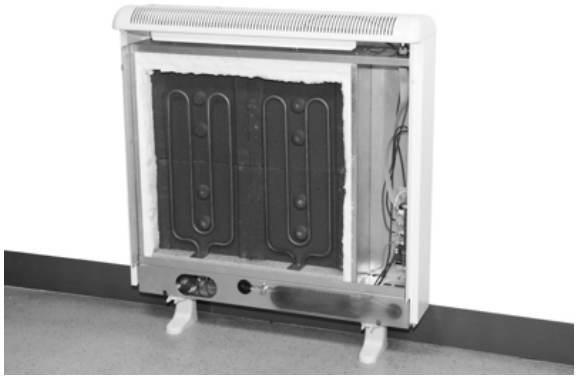


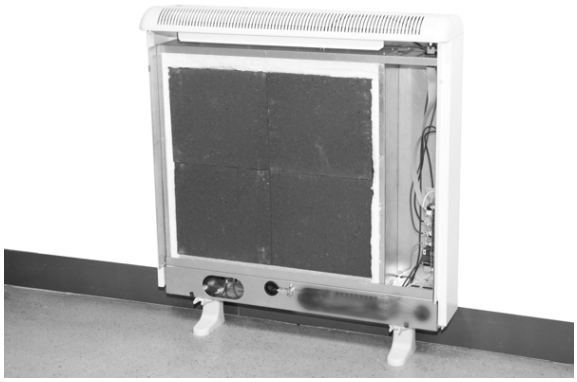


9. - Place the storage bricks carefully, with the flat side facing the back of the heater. Arrange two row levels of bricks.



10. Place the heating elements back into their original position. Place the other two rows of storage bricks with the flat side facing out and always on the heating elements supporting tabs.





11. Replace the inner front panel. If the bricks have been fitted correctly you will have no difficulty in replacing the panel. Make sure the bottom edge of the inner panel is inside the front lip of the heater. Please see below:

RIGHT POSITION

WRONG POSITION

12. - Reconnect the two FAST-ON terminals to the aluminum heating element attached to the inner panel at both ends.

13. – When replacing the exterior front panel, align the 2 plastic upper pegs on the heater with the holes in the exterior panel. Push the top up into place and push the bottom in until it rests on the plastic feet.

14. - Replace the front panel with screws.

RELOCATION

WARNING: Relocation to another location must be carried out by an experienced technician.

If during reinstallation the thermal insulation shows any sign of damage, it must be removed and replaced by an identical part.

MANUALLY RESET TEMPERATURE LIMITER

This heater employs a manually reset temperature limiter (see LR in the connection diagram).

This safety device operates when high temperatures are reached at the top of the heater. It requires re-setting manually:
Let the heater cool. The cause of overheating should be investigated.

WARNING: Re-setting manually must be carried out only by an experienced technician.

Turn off the heater at the circuit breaker.

Take off the front panel by removing the two screws located at the bottom. Find the limiter LR in the connection diagram and push the small pin until a click is heard.

3. - OPERATING INSTRUCTIONS

CAUTION: DO NOT USE THIS HEATER TO DRY CLOTHES. Do not cover this heater at any time.

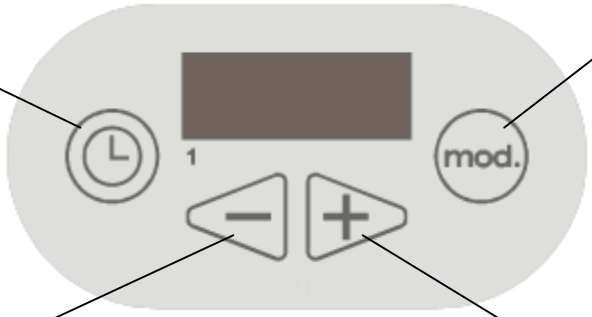
CONNECTION/ DISCONNECTION

Power switch. All models are equipped with a switch on the back side panel. It is used to connect and disconnect ECOMBI.

KEYBOARD:

"Clock" key:

Press the key to display date and time. Hold it for more than 8 seconds to change values.



"Operation mode" key:

Press the key to select different operation modes.
FROST PROTECTION
AUTOMATIC STORAGE HEATER EMITTER
ECOMBI MANUAL
ECOMBI AUTOMATIC

KEY "- "

Press the key to decrease different values

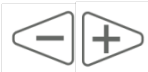
KEY " +":

Press the key to increase different values

KEYBOARD LOCK:

In any operation mode it is possible to lock the keyboard holding the keys simultaneously for several seconds.

When the keyboard is locked, if any button is pressed, display will show [- -] and the appliance will not respond.

To unlock the keyboard hold the keys  simultaneously again for several seconds.

SYSTEM TIME SETTING

It is necessary to set the system time for the appliance to follow correct programming and to adjust it correctly to the off peak time periods. Off peak periods have to fit with the ones established in GENERAL SETTINGS part as P1, P2, P3, and P4 (please go to "General Settings").

To set the system time, hold the key for 8 seconds. The Hour values are changed with the and keys.

Then press the key to save and proceed to change the minutes values. Press again to save and proceed to change the week day if weekly programming option is enabled in the GENERAL SETTINGS part:
If it is necessary to set up different values for different days in a week, please go to "General Settings" in this manual and change P7 setting to "ON" position. Once it is changed come back to "System time setting", set hour, minutes, week's day and validate.

ECOMBI does not change automatically from summer time to winter time or vice versa. Depending on the tariff it may be necessary to change the clock settings to fit these two timings.

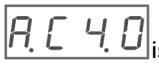
OPERATIONMODES:

By pressing the mod. key, various operation modes may be selected: FROST PROTECTION, STORAGE HEATER, EMITTER, ECOMBI MANUAL or ECOMBI AUTOMATIC.

1 - FROST PROTECTION MODE:

To select this mode press the mod. key several times until the message is displayed. The set up temperature will be 7° C. the appliance will maintain this temperature through convector operation. Storage heater will be off in this case.

2 – STORAGE HEATER MODE:

To select this mode press the mod. key several times until the message  is displayed.

"AC" stands for STORAGE HEATER in Spanish. "4.0" would be the charge control position set to position 4.
As in a standard storage heater equipped with a 5- position charge control, charging settings in ECOMBI go from 0 (minimum charge) to 5 (maximum charge):

5.0 = charge 100% (during all the reduced rate time)
4.5 = 90%
4.0 = 80%
3,5 = 70%
3.0 = 60%
2.5 = 50%
2.0 = 40%
1.5 = 30%
1.0 = 20%
0.5 = 10%
0.0 = 0%

While ECOMBI is charging (electric consumption) a small red dot will appear between the A and the C in the display.

DEFERRED CHARGING:

This function in ECOMBI allows optimizing the energy management and consumption. If in an off-peak period of 8 hours, it is only necessary to charge at 50%, this is 4 hours, this function will make the effective charging period the last 4 hours during the off-peak period. This means that ECOMBI will be fully charged at the end of the charging period.
In order to enable / disable this option please go to "General Settings" part in this manual and change P6 setting as ON / OFF.

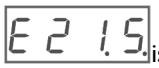
PROTECTION FOR EXCESS OF TEMPERATURE IN THE ROOM:

In order to achieve maximum savings and avoid unnecessary energy consumption, if , during the charging period ,the temperature in the room exceeds the temperature set up in ECOMBI for that room, then the charging will be interrupted until the temperature in the room decreases by 1°C.

3 –EMITTER MODE:

This operation mode is used when it is necessary to heat the room temporarily and there is no need for storage heating.

Press the

key several times until the message 

is displayed.

"E" stands for EMITTER.
"21.5" stands for the set up temperature in °C.
Emitter will operate until the temperature in the room reaches 21,5°C, then, it will maintain the temperature.

If needed, it is possible to change the set point temperature by using the keys and . Temperature value will be changing in steps of 0,5°C.

Small red dot at the very right part of the display will show that the convector heating element is working at that moment.

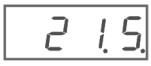
Pressing simultaneously keys

and will display room temperature taken from the sensor at the bottom of the device.
There can be a temperature difference between this sensor and a normal thermometer set up in a wall room. This is because temperature is different at different heights in the room. The one at the floor is normally lower. User can adjust the sensor so that different thermometers show the same temperature. For this you can go to General Settings part and modify the sensor reading according to P5 setting.

4 –ECOMBI MANUAL MODE:

This mode will allow ECOMBI to operate the Storage Heater and the Convector together in a combined way. The Storage Heater will charge based on the settings of "AUTOMATIC STORAGE HEATER MODE" and if there is any kind of heat loss in the room and a decrease in the temperature, ECOMBI may operate the "EMITTER MODE "to compensate and balance again the room temperature.

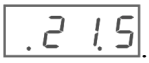
To select this mode press the key

several times until in the display only shows the set up temperature. This is without any preceding letter "A" or "E" displayed. I.e. 

.This means that 21,5°C is the system set up temperature (default).

It is possible to adjust the set up temperature by using the keys and . Temperature value will be changing in increments of 0,5°C.

When the convector heating element is working a small red dot will appear at the very right of the display.

While ECOMBI is charging a small red dot will appear on the left side of the display 

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Storage Heater and Convector will never work at the same time.

5 –ECOMBI AUTOMATIC MODE, with charge correction:

In this mode ECOMBI operates in a combined way. Storage heater operates during the off peak rate, ECOMBI may operate as Emitter providing additional heating to the room if necessary.

ALSO THERE WILL BE AN AUTOMATIC CHARGE CORRECTION OF THE STORAGE HEATER FOR THE FOLLOWING CHARGING PERIODS.

To activate this mode press the mod. key several times until the message A 2 1.5 is displayed.

A stands for AUTOMATIC mode.
21,5 is the set up temperature in °C.
When the Emitter is on, a small red dot at the very right of the screen will be displayed.

A small red dot next to A will be displayed, when storage heater is on A. 2 1.5.

Operation in this mode is similar to the Ecombi Manual Mode but the % of the storage heater charge is corrected automatically.

If working hours of Emitter is higher than a certain value, storage heater charge will be increased by a certain %. On the other hand, if Emitter working hours does not exceed this value, storage heater charge level is reduced by the same %.

This behavior adapts the consumption to the real thermal needs, allowing the maximum level of energy savings at the required comfort required.

The set up temperature is independent of the Storage Heater level of charge. Default setting for charge is 4.0. This value can be modified by entering into STORAGE HEATER MODE and changing these charging values from 0 to 5.0.

WEEKLY PROGRAMMING

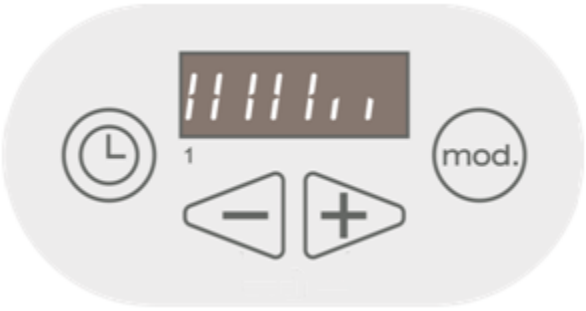
It is possible to select which days ECOMBI will work and which days it will not.

By activating P7 in GENERAL SETTINGS, this option will be enabled.

To enter in weekly settings, hold the key for 8 seconds.

Blinking hours will be displayed. Press the key, then blinking minutes will be displayed. Press the key, then the first day of the week will blink. Change the week day if necessary with the keys and . Press the key to save.

After that it is possible to select which days of the week ECOMBI will follow the selected mode operation or FROST PROTECTION operation. An example can be seen here below.



In this example ECOMBI will be operating in normal mode from Monday (day 1) to Friday, and in FROST PROTECTION mode on Saturday and Sunday.

One or two bars will be blinking for Day 1.
One bar stands for FROST PROTECTION permanent mode.
Two bars stand for SELECTED MODE (last mode selected out of the five available).

Proceed to change the value for day 1 with keys and , save with key. Proceed to day 2 and so on to day 7.

GENERAL SETTINGS:

ECOMBI general operation settings can be modified.

By pressing the

key at the same time as we turn on the heater with the power switch, located at the right side panel, we gain access to the general settings menu.

P1	Starting time of reduced (off peak) rate electric period.
P2	Ending time of reduced rate electric period.
P3	Starting time of the second reduced rate electric period (if not available set up 00.00).
P4	Ending time of the second reduced rate period (if not available set up 00.00)
P5	Temperature sensor correction (values from -5°C to +5°C)
P6	Deferred charge ON: charge ends at the same time than reduce rate period. OFF: charge starts at the same time than reduce rate period.
P7	Weekly programming ON/OFF.
P8	Limit factor of emitter operation mode to increase or reduce the charge (Possible values 0.05 -0.10-0.15-0.20-0.25-0.30-0.35-0.40)
P9	Percentage of automatic charge regulation (values: 05-10-20-25)
PA	Excess of temperature protection during the charge. Degrees higher than the set up temperature when the charge is interrupted.(Values 1-2-3-4-5)

Advance with the keys and , push the

key to enter in a parameter. Use same keys to modify it.

To save the new values it is necessary to pass through all of them to the last one (PA).

DEFAULT SETTINGS:

By pushing the Clock key of the device connected to the mains. Software resets to the default settings. Four horizontal blinking segments will appear in the screen to confirm it.

Incorrect time settings, erroneous programming of the reduced rate time and too high temperature settings may result in a high cost of your electricity bill.

4.- TROUBLESHOOTING

ECOMBI does not heat.	Please check it is connected and switched on. Make sure the device is not covered or the lower air inlets are not obstructed. The LR safety limit may be activated; in this case it is necessary to rearm it manually.Please contact technician.
ECOMBI does not reach set up temperature	Make sure that adequate temperature is selected. Make sure the heater is sized correctly for heat loss.
ERR 1 in display	Temperature sensor trouble, please contact technician.
Keyboard does not respond	If display shows [- -] display is blocked. Press the "+" and "-" key at the same time for several seconds to unblock it..

5.- MAINTENANCE INSTRUCTIONS

Before cleaning, make sure the power has been turned off at the circuit breaker panel and that the heating element of the heater is cool.
Occasionally, clean dust with a dry, soft cloth. Do not use any solvent or abrasive product for cleaning.
When the Heating season is finished, please disconnect the device by turning off the power switch located at the right back of the unit or at the circuit breaker.
Any other servicing should be performed by an authorized technician.

ECOMBI has been manufactured under a fully assured quality system and using environmentally friendly processes. Once its useful life is finished please take the device to a recycling depot so that its components can be recycled in an appropriate way.

6.- CONNECTION DIAGRAMS

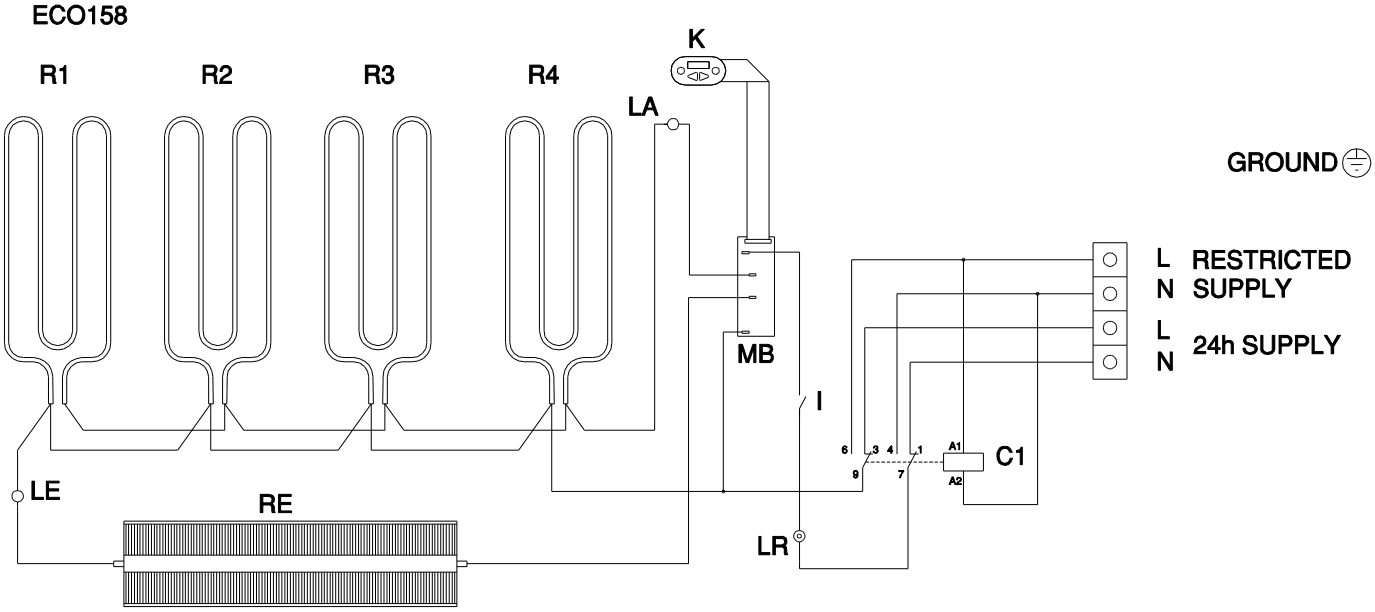
I	Mains switch
R1, R2, R3, R4	Storage heater heating elements
RE	Emitter heating element
LA	Storage heater limit thermostat
LE	Emitter limit thermostat
LR	Manual Safety Limit
K	Keyboard
MB	Main Board
C1	Power Relay

ECO408

ECO308

ECO208

ECO158



TECHNICAL FEATURES

Modelo	ECO158	ECO208	ECO308	ECO408
CONNECTION	230- 240V ~	230- 240V ~	230- 240V ~	230- 240V ~
CONVECTOR OUTPUT* 230/240	450/490W	600/653W	900/980W	1200/1307W
STORAGE HEATER OUTPUT 230/240	975/1062W	1300/1415W	1950/2123W	2600/2831W
CHARGE PERIOD	8 – 7h	8 – 7h	8 – 7h	8 – 7h
CHARGING	7.8 kWh	10.4 kWh	15.6 kWh	20.8 kWh
INSULATION	Class I	Class I	Class I	Class I
LENGTH	55cm	66cm	89cm	111cm
HEIGHT	73cm	73cm	73cm	73cm
DEPTH	18cm	18cm	18cm	18cm
WEIGHT	57kg	76kg	111kg	147kg
NUM. OF BRICKS 7,5kg	-	8	12	16
NUM. OF BRICKS 11,3kg	4	-	-	-
BRICK PACKAGE	**11072**	**11016**	**11016**	**11016**

* Storage heater elements and convector element will never operate at the same time.

NOTES

WARNING: In order to avoid overheating do not cover the heater.

The symbol on the product or in its packaging indicates that this product may not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product. These instructions are only valid in the EU member states.

ELNUR UK Ltd.
Unit 1, Brown Street North
Leigh, Lancashire
WN7 1BU
www.elnur.co.uk

Customer Service Department:
Telephone +44(0)1942 670119
technical@elnur.co.uk

Manufactured by:
ELNUR, S.A.
Madrid, Spain
www.elnur-global.com
export@elnur-global.com

Management System International Certifications:

ISO 9001

ISO 14001

As a part of the policy of continuous product improvement Elnur reserves the right to alter specifications without notice.

INSTALLATION INSTRUCTIONS AND USER GUIDE WEB VERSION